

DIVISION OF LABOR IN THIS DEPARTMENT

It is the hope of the Editor to secure the aid of special workers in the preparation of these notes. Dr. Paul S. Welch has agreed to furnish abstracts of such entomological papers as may seem suitable for the purposes of this department. The following notes are furnished by him. Dr. George R. La Rue will furnish abstracts in histology and microtechnic.

INSECTS AND DISEASE

Doane (Journ. Econ. Ent., 6:366-385, 1913) contributes an important and useful paper entitled: "An Annotated List of the Literature on Insects and Disease for the year 1912." Brief mention is made of the work of Brues and Sheppard, Rosenau, and Anderson and Frost on the transmission of infantile paralysis to monkeys by the common stable fly, *Stomoxys calcitrans*. Whether this is the usual method of transmission among human beings remains to be determined. The *Simuliidæ* have continued to receive attention on account of their possible relation as carriers of pelagra. The work of Forbes, Garman, and Hunter is referred to as presenting very important circumstantial evidence but it remains to be proven that these flies really carry the virus which causes the disease. Other recent work on malaria and mosquitoes, the house fly and typhoid, and trypanosomes and sleeping sickness is briefly mentioned. The chief value of the article lies in the extensive bibliography which contains nearly three hundred references to works on medical entomology issued during 1912.

ADAPTATION IN THE GALL MIDGES

Felt (Canadian Entomol., 45:371-379, 1913) discusses "Adaptation in the Gall Midges." Forms of adaptation are grouped under three heads: (1) Strength, aggressive and defensive, (2) Prolificacy, and (3) Evasive adaptations. Bud galls, leaf galls, stem galls, and root galls are discussed with reference to these classes. In spite of the fact that this group of insects, because of its general similarity in habit, might be thought to exhibit slight variations in structure a number of interesting significant structural modifications are found in the antennæ, palpi, wings, and generative organs. It is shown that the gall midges can not be counted as particularly strong or prolific forms but they have been able to maintain them-

selves largely by evasive adaptations which secure protection for them at the expense of the host plant. This group of insects presents many interesting biological and morphological problems which are unsolved and according to Dr. Felt there is perhaps no insect family better suited in many ways for the study of adaptation.

BIOLGY OF MAY-FLIES

Morgan (Ann. Ent. Soc. Amer., 6:371-413, 1913) in an article entitled "A Contribution to the Biology of May-flies" gives interesting and valuable data on the different stages of the life history and modifications of the structures of the nymph and adult. The amount of detail makes a short summary impossible. Aside from the considerable amount of new data which is presented, the feature of the paper which is of particular value to teachers and investigators is the complete bibliography on May-flies at the end of the paper which contains approximately 300 titles of foreign and American literature.

HIBERNATION OF THE HOUSE-FLY

Skinner (Ent. News. 24:303-304, 1913) in discussing the often repeated question as to what becomes of the common house-fly during the winter opposes the views held by Howard and Hewitt who claim that the fly hibernates as an adult. His observations lead him to believe that the house-fly hibernates as a pupa and not as an adult.

A PARASITE OF THE CHINCH BUG

McColloch (Can. Ent., 45:342-343, 1913) gives a preliminary report of the discovery of a hymenopterous parasite on the eggs of the chinch bug which promises to be of considerable economic interest. Mr. A. B. Gehen, Entomological Assistant of the Bureau of Entomology, U. S. Dept. of Agric., to whom the adult parasite was sent for identification, determined it as a member of the family *Proctotrypidae* and states that preliminary examination indicated that it is both a new species and a new genus. The parasite was found in every wheat and corn field examined around Manhattan, Kansas. The average percentage of parasitism has been found to be about 20.8. The length of the life cycle was found to vary from 10 to 18 days and as many as six generations were noted between May 19 and August 10. A complete account is to appear later.